

TVI-FE SERIES MOTORIZED VALVE

DESCRIPTION

FE series motorized valves are used to control the opening or closing for the pipe in the chilled/hot water system so to control the room temperature. The valve is driven by hysteretic synchronous motor with spring return. The valve is normal-closed. When the thermostat is working, it will provide an opening signal, and the motorized valve will be turned on to open.

Then the chilled/hot water will enter into the coil and supply the cold/hot to the room. When the room temperature rises up to the set point, the thermostat will make the valve power off. At the same time the valve will be closed by return spring and the water to the coil will be shut off. The room temperature will be kept in the setting range all the time through the opening and closing of the valve.

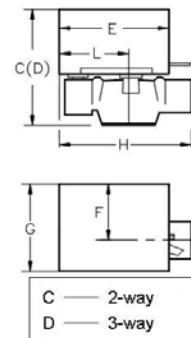
FE series motorized valve has two types: normal-closed 2-way and diverting 3-way. It has three sizes: 1/2", 3/4" and 1". There are six kinds of specifications classified by the access type and the fluid characteristic. There are also different pipe connection for customers' selection: Please refer below.

FE series motorized valve is flexible, reliable, long-life and low noise. It is designed to withstand high temperature condition in many concealed fan coil applications. The foam package can be used for insulation for the valve. The installation work is very simple.



DIMENSIONS

| MODEL | DIMENSION (inch) | | | | | | |
|------------|-------------------|--------------------|-------------------|-------------------|------------------|--------------------|-------------------|
| | C | D | E | F | G | H | L |
| 1/2" 2-Way | 4 ^{1/8} | - | 3 ^{5/16} | 1 ^{3/8} | 2 ^{1/2} | 3 ^{9/16} | 2 ^{3/16} |
| 1/2" 3-Way | - | 4 ^{9/16} | 3 ^{5/16} | 1 ^{3/8} | 2 ^{1/2} | 3 ^{9/16} | 2 ^{3/16} |
| 3/4" 2-Way | 4 ^{1/8} | - | 3 ^{5/16} | 1 ^{3/8} | 2 ^{1/2} | 3 ^{11/16} | 2 |
| 3/4" 3-Way | - | 4 ^{11/16} | 3 ^{5/16} | 1 ^{3/8} | 2 ^{1/2} | 3 ^{11/16} | 2 |
| 1" 2-Way | 4 ^{5/16} | - | 3 ^{5/16} | 1 ^{7/16} | 2 ^{1/2} | 3 ^{3/4} | 1 ^{7/8} |
| 1" 3-Way | - | 4 ^{15/16} | 3 ^{5/16} | 1 ^{7/16} | 2 ^{1/2} | 3 ^{3/4} | 1 ^{7/8} |



SPECIFICATIONS AND DATA:

| MODEL | TYPE | SIZE | Cv | MEDIUM | FLUID TEMP. | WORKING TEMP. | ELECTRICAL RATING |
|------------|----------------------|------|-----|---------------------|-------------|---------------|--|
| TVI-FE-215 | Normal -closed 2-Way | 1/2" | 3.7 | Chilled / hot water | <201 °F | <104 °F | 24V, 110V, 120V, 220V ±10% 50-60HZ |
| TVI-FE-315 | Diverting 3-Way | 1/2" | 5.0 | | | | |
| TVI-FE-220 | Normal -closed 2-Way | 3/4" | 3.7 | | | | |
| TVI-FE-320 | Diverting 3-Way | 3/4" | 5.4 | | | | 24V, 110V, 120V, 220V ±10% 50-60HZ Micro - switch 3A 250V |
| TVI-FE-225 | Normal -closed 2-Way | 1" | 8.0 | | | | |
| TVI-FE-325 | Diverting 3-Way | 1" | 6.7 | | | | |

- Standard 220 Vac /230 Vac voltage, 24 Vac, 110 Vac
- Please specify when ordering
- Standard connection : BSP, other type connection

NPT(N), Sweat(S), Inverted Flare(F) etc, please revert to us when ordering.

INSTALLATION AND OPERATION INSTRUCTION

1. **Normal-closed** 2-way and diverting 3-way valve are installed as Figure 1, 2 and 3. For high building, pressure-reducing valve should be installed on branch pipe at ground floor.
2. **Note:** When the valve is mounted on horizontal pipe, the angle must be positioned less than 85° (see Figure 4).
3. **When** the valve is mounted on vertical pipe, it must be prevented from dripping.
4. **Manual** operating lever: Move the manual operating lever slowly and hold in the retaining notch, and then the valve is in normal-opened position. When the valve is first powered on, the lever goes back to the automatic position again.

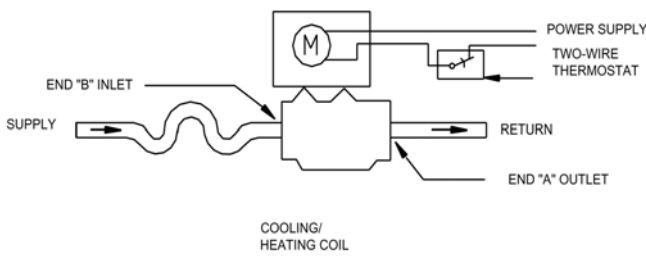


Fig. 1 Two-way valve

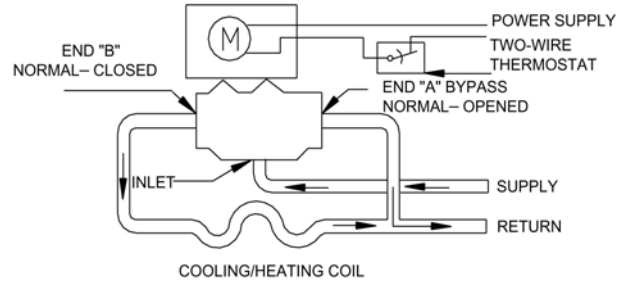


Fig. 2 Three-way valve

When install normal-closed 2-way valve, the flow direction is from end "B" to "A", for normal-open valve, it is from end "A" to "B". In both situations, the valve closing direction is opposite.

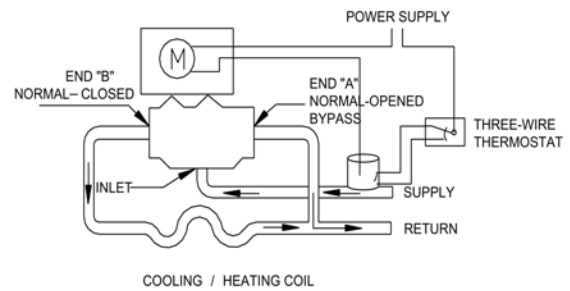
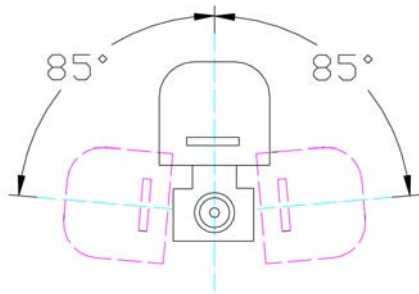


Fig. 3 Three-way valve with box change-over switch

When install diverting 3-way valve, end "B" is supply to the coil, end "A" is by-pass, there is no mark for inlet, end "A" and "B" is marked on the bottom of the valve.

When the valve is with auxiliary micro switch, the wiring diagram is as the following: Upon Request.

